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| EXAMINER | |
|---|---|
| BLACKWELL, GWENDOLYN | |

| ART UNIT | PAPER NUMBER |
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| 1794 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/580,916 | MARUMOTO, TADASHI | |
| | Examiner | Art Unit | |
| | GWENDOLYN BLACKWELL | 1794 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *09 November 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,2 and 5-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 5-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/10/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102/103*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

*(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-2, 5-6, and 11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over United States Patent no. 6,387,516, Shichiri et al.

*Regarding claims 1 and 11*

Shichiri et al disclose an interlayer for laminated glass wherein the interlayer is comprised of a resin, (column 5, lines 26-50); a sodium/potassium salt (alkali metal) that should be present in not more than 50 ppm for sodium and not more than 100 ppm for potassium, (column 7, lines 8-13); alkaline earth metal salts, (column 7, lines 56-60), in an amount of 0.01 to 0.2 parts by weight, (column 15, lines 15-26); a plasticizer, (column 15, lines 33-67); and acetyl acetone in an amount of 0.02 to 2 parts by weight, (column 9, lines 47-58). With regards to the amount of acetyl acetone, it would have been obvious to one of ordinary skill in the art at the time of invention to have selected the overlapping portion of the ranges disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, meeting the limitations of claims 1 and 11. *In re Malagari,* 182 USPQ 549.

*Regarding claims 2 and 5-6*

Magnesium hexanoate, magnesium heptanoate, magnesium octanoate, and magnesium nonanoate can be used for the alkaline earth metal, (column 13, lines 8-12), meeting the limitations of claims 2 and 5.

The potassium salt can be present as a salt of an organic acid containing 5 to 16 carbon atoms which would include potassium hexanoate, potassium heptanoate, potassium octanoate, and potassium nonanoate, (column 13, lines 1-7), meeting the limitations of claim 6.

***Claim Rejections - 35 USC § 103***

5. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent no. 6,387,516, Shichiri et al as applied to claims 1-2 and 5-6 above, and further in view of Applicant's admission.

*Regarding claims 7-10*

The limitations of claims 1-2 and 5-6 with regards to the composition of the interlayer are set forth above. Shichiri et al disclose that the interlayer can be used in a laminated glass structure, (column 18, lines 6-67). Shichiri et al do not specifically disclose that the laminated glass structure also includes a metal coating layer between the interlayer and one of the glass sheets.

Applicant admits that it is known in the art to have a laminated glass having a metal coating layer between the interlayer and one of the glass sheets, (specification, page 1, lines 30-35).

The inventions disclosed by Shichiri et al and Applicant are analogous inventions related to the use of interlayers to form laminated glass. It would have been obvious to one skilled in the art as the time of invention to modify the laminated glass of Shichiri et al with a metal coating layer as disclosed by Applicant in order to provide heat ray reflecting properties to the laminated glass structure, meeting the requirements of claims 7-10.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent no. 6,387,516, Shichiri et al as applied to claim 1 above, and further in view of United States Patent no. 6,673,456, Kobata et al.

The limitations of claim 1 with regards to the composition of the interlayer are set forth above. Shichiri et al disclose that the interlayer can be used in a laminated glass structure, (column 18, lines 6-67). Shichiri et al do not specifically disclose that the maximum amount of acetyl acetone is 0.012 parts by weight.

Kobata et al disclose an interlayer film for laminated glass wherein the film can be comprised of an adhesive resin, (columns 5-6, lines 62-42) , a plasticizer, (column 11, lines 25-35), a chelating agent such as acetyl acetone preferably in an amount in the range of 0.01 to 1 part by weight of resin, (column 9, lines 1-25), and optionally bonding agents such an alkali metal salt and alkaline earth metal salt such as potassium, sodium, and magniesium used either singly or two or more in combination, (columns 12-13, lines 40-47).

Shichiri et al and Kobata et al disclose analogous inventions related to interlayer films for laminated glass wherein the components of the interlayer are substantially similar. While Shichiri et al may disclose that an amount below 0.02 part by weight may be insufficient, Kobata et al disclose that a preferable amount of at least 0.01 part by weight is sufficient. It would have been obvious to one skilled in the art at the time of invention to modify the interlayer of Shichiri et al with the amount of acetayl acetone as taught in Kobata et al in order to have an interlayer with low haze.

***Response to Amendment***

7. The declaration under 37 CFR 1.132 filed November 9, 2009 is insufficient to overcome the rejection of claims 1-2 and 5-6 based upon 35 USC 102(b) and claims 7-10 based upon 35

USC 103 as set forth in the last Office action because: the facts presented are not germane to the rejection at issue as well as the showing is not commensurate in scope with the claims. Applicant has indicated that the reference Shichiri et al does not disclose the range as claimed by Applicant and that the range as claimed is critical. Applicant has demonstrated in the 1.132 Declaration 6 acetyl acetone points; 0, 0.005, 0.008, 0.1, 0.2, and 0.5. Although Applicant has demonstrated that the end points of the claimed range of 0.008 to 0.1 parts by weight provides the desired results, Shichiri et al disclose a range of 0.02 to 2 parts by weight of acetyl acetone, which overlaps the claimed range. Applicant did not show what would be the expected results of the endpoint of 0.02 which falls within Applicant's claimed range. As 0.02 falls within the claimed range, it would be expected that it would meet the limitations of the claim as well as producing the same results as set forth in the Declaration with regards to the 0.008 and 0.1 points.

***Response to Arguments***

8. Applicant's arguments filed November 9, 2009 have been fully considered but they are not persuasive. Applicant contends that (1) the Declaration overcomes the rejection, (2) Shichiri et al does not disclose the amount and use of acetyl acetone with enough specificity, and (3) that the one example that used acetyl acetone is outside of Applicant's claimed range.

9. With regards to contention (1), see the response to the Declaration set forth above.

10. With regards to contention (2), although Applicant has indicated that the disclosure of acetyl acetone is merely described as one of the possible examples, the listing of acetyl acetone is not part of laundry list disclosure of every possible moiety available that would achieve the

desired effect. Acetyl acetone is listed as one of twelve compounds. In addition, Shichiri et al specifically disclose that the twelve listed compounds are present in a range of 0.02 to 2 parts by weight, (column 9, lines 39-51). There is nothing in the disclosure of Shichiri et al that would indicate that acetyl acetone could not be used in an amount of 0.02 to 0.1 parts by weight.

11. With regards to contention (3), although the example used an amount outside the claimed range of acetyl acetone, Shichiri et al is relevant for all it contains. Shichiri et al disclose the composition as well as a portion of Applicant's claimed range regarding the amount of acetyl acetone. As the disclosed range of 0.02 to 2 parts by weight, overlaps Applicant's claimed range by at least the 0.02 to 0.1 parts by weight, the reference is still considered as relevant.

12. In light of the comments above, the rejection of claims 1-2 and 5-10 are maintained. New claims 11 and 12 have been rejected as set forth above.

***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GWENDOLYN BLACKWELL whose telephone number is (571)272-5772. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GWENDOLYN BLACKWELL/
Primary Examiner, Art Unit 1794